

### **REMARKS**

Favorable reconsideration, reexamination, and allowance of the present patent application are respectfully requested in view of the foregoing amendments and the following remarks. The amendments to the claims are supported by the original disclosure since the limitations added by amendment were present in dependent claims.

#### ***Specification***

The specification filed on January 9, 2003 has not been entered as the Examiner alleges the new specification still contains idiomatic English. A new substitute specification is presented herewith. This specification addresses the Examiner examples cited on pages 2-3 of the Official Action, the objections cited on page 3 of the Official Action, as well as many other instances of incorrect grammar or idiomatic English. No new matter is presented, and entry thereof is respectfully requested.

#### ***Objections to claim 7***

Claim 7 is objected to for missing a word. The claim has been amended as requested by the Examiner; withdrawal of the objection is respectfully requested.

#### ***Rejection of claim 10 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph***

Claim 10 is rejected under 35 U.S.C. §112, 2<sup>nd</sup> paragraph for allegedly being vague and indefinite in the recitation of "at least one bacterium". This language has been removed by the foregoing amendments; withdrawal of the rejection is respectfully requested.

#### ***Rejection of claims 1-8 and 10 under 35 U.S.C. §112, 1<sup>st</sup> paragraph (enablement)***

Claims 1-8 and 10 have been rejected under 35 U.S.C. §112, 1<sup>st</sup> paragraph because the specification does allegedly not provide an enabling disclosure for any method using any microorganism with any enzyme constituting the respiratory chain pathway with high energy that is enhanced and/or low energy that is deficient.

Although applicants do not necessarily agree with the Examiner's allegations, the claims have been amended to specify the specific enzyme of either the high energy

respiratory pathway or the low energy respiratory pathway. Applicants provide sufficient guidance in the specification, and along with the knowledge in the art regarding fermentation technologies, and the high level of skill in the art (acknowledged by the Examiner on page 8), one of ordinary skill in the art would be able to practice the claimed methods within the limitation of the claims without undue experimentation. This is even more evident now that the claims are amended to specify the specific enzymes, and either their enhancement or deficiency.

The Examiner states on page 4 that the specification is enabling for a method of producing a target substance utilizing microorganisms with an enhanced SoxM type oxidase or NDH-1 activity and deficient cytochrome bo type oxidase or NDH-II activity. The claims are limited to these species now; and therefore, these claims should be fully enabled and this rejection should be withdrawn.

For these reasons, withdrawal of the rejection is respectfully requested.

***Rejection of claims 1-8 and 10 under 35 U.S.C. §112, 1<sup>st</sup> paragraph (written description)***

Claims 1-8 and 10 have been rejected under 35 U.S.C. §112, 1<sup>st</sup> paragraph for allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Applicants respectfully disagree with the Examiner; however, the claims have been amended as described above, and now specify the specific enzyme of either the high energy respiratory pathway or the low energy respiratory pathway. The claims as amended recite a genus which is adequately described in the specification sufficient to convey that applicants were clearly in possession of the claimed invention. The claims now recite the specific enzymes which take part in either the high or low energy respiratory pathways, and whether they are enhanced or deficient in their activity. Therefore, it is clear applicants have sufficiently described the invention in the specification.

For these reasons, withdrawal of the claims is respectfully requested.

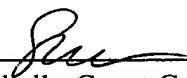
***Conclusion***

For at least the foregoing reasons, Applicant respectfully submits that the present patent application is in condition for allowance. An early indication of the allowability of the present patent application is therefore respectfully solicited.

If Examiner Marvich believes that a telephone conference with the undersigned would expedite passage of the present patent application to issue, she is invited to call on the number below.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and the undersigned respectfully requests that she be contacted immediately.

Respectfully submitted,

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